CLAIMS

What is claimed is:

1.   A method comprising:

obtaining performance data about a system using a first tool;

sorting the performance data by a number of contexts, each context divided into a number of sub-contexts;

automatic prioritizing the performance data for at least one sub-context using a pre-determined criteria;

obtaining an insight for at least one sub-context based on the prioritized performance data using a second tool; and

obtaining an advice associated with that insight using the second tool.

2.   The method of claim 1 further comprising inputting the pre-determined criteria using a user interface.

3.   The method of claim 1 further comprising displaying the insight and the advice on a display.

4.   The method of claim 1 wherein obtaining performance data about a system using a first tool comprises:

collecting data on a number of programs run on a system during a sampling period based on performance counters; and

transferring the data to a file.

5.   The method of claim 4 wherein the performance data includes central processing unit (CPU) event measurements.

6.   The method of claim 5 wherein the system is a processor.

7.   The method of claim 4 wherein one performance counter is clockticks.

8.   The method of claim 4 wherein one performance counter is retired instructions.

9.   The method of claim 1 wherein sorting the data by a number of contexts includes sorting data measurements corresponding to a number of processes in each program, the program being the context and the processes being sub-contexts.

10.   The method of claim 1 wherein sorting the data by a number of contexts includes sorting data measurements corresponding to a number of modules for each program, the program being the context and the modules being sub-contexts.

11.   The method of claim 1 wherein sorting the data by a number of contexts includes sorting data measurements corresponding to a number of bins of each program, each bin containing a number of lines of the program, the program being the context and the bins being sub-contexts.

12. The method of claim 1 wherein the pre-determined criteria is the longest running time.

13. The method of claim 1 wherein the pre-determined criteria is the greatest number of clockticks.

14. The method of claim 1 wherein the pre-determined criteria is the greatest number of retired instructions.

15. A machine-readable storage medium tangibly embodying a sequence of instructions executable by the machine to perform a method, the method comprising:

obtaining performance data about a system using a first tool;

sorting the performance data by a number of contexts, each context divided into a number of sub-contexts;

automatic prioritizing the performance data for at least one sub-context using a pre-determined criteria;

obtaining an insight for at least one sub-context based on the prioritized performance data using a second tool; and

obtaining an advice associated with that insight using the second tool.

16.   The machine-readable storage medium of claim 17 wherein the pre-determined criteria is the highest number of clockticks.

17.   A method comprising:

obtaining performance data about a first system and a second system using a first tool;

sorting the performance data for both systems by a number of contexts, each context divided into a number of sub-contexts;

automatic prioritizing the performance data for at least one sub-context using a pre-determined criteria;

comparing the first system and the second system by comparing the prioritized performance data;

obtaining an insight for a sub-context of one system by using the comparison between the first and second systems using a second tool; and

obtaining an advice associated with that insight using the second tool.

18.   The method of claim 17 further comprising inputting the pre-determined criteria using a user interface.

19.   The method of claim 17 further comprising displaying the prioritized performance data, the insight, and the advice on a display.

20.   The method of claim 17 wherein obtaining performance data for a first system and a second system using a tool comprises:

collecting data on a number of programs run on a system during a sampling period based on performance counters; and

transferring the data to a file.

21.   The method of claim 20 wherein the performance data includes central processing unit (CPU) event measurements.

22.   The method of claim 20 wherein the first and second systems are processors.

23.   The method of claim 20 wherein one performance counter is clockticks.

24.   The method of claim 20 wherein one performance counter is retired instructions.

25.   The method of claim 17 wherein sorting the data by a number of contexts includes sorting performance data measurements for number of processes for each program, the program being the context and the processes being the sub-contexts.

26.   The method of claim 17 wherein sorting the data by a number of contexts includes sorting performance data measurements for a number of modules for each program, the program being the context and the modules being the sub-contexts.

27.   The method of claim 17 wherein sorting the data by a number of contexts includes sorting performance data measurements for a number of bins for each program, each bin containing a number of instruction of the program, the program being the context and the bins being the sub-contexts.

28.   The method of claim 17 wherein the pre-determined criteria is an equation, the equation being $T_1 - T_2$, where

T_1 represents a running time of at least one of a context and a sub-context on the first system, and

T_2 represents a running time of at least one of the context and the sub-context on the second system.

29.   The method of claim 17 wherein the pre-determined criteria is an equation, the equation being $C_{T1} - C_{T2}$, where

C_{T1} represents the clockticks for at least one of a context and a sub-context on the first system, and

C_{T2} represents the clockticks for at least one of the context and the sub-context on the second system.

30. The method of claim 17 wherein the pre-determined criteria is an equation, the equation being $0.8 \times C_{T1} - C_{T2}$, where

C_{T1} represents the clockticks for at least one of a context and a sub-context on the first system, and

C_{T2} represents the clockticks for at least one of the context and the sub-context on the second system.

31. A machine-readable storage medium tangibly embodying a sequence of instructions executable by the machine to perform a method, the method comprising:

obtaining performance data about a first system and a second system using a first tool;

sorting the performance data for both systems by a number of contexts, each context divided into a number of sub-contexts;

automatic prioritizing the performance data for at least one sub-context using a pre-determined criteria;

comparing the first system and the second system by comparing the prioritized performance data;

obtaining an insight for a sub-context of one system by using the comparison between the first and second systems using a second tool; and

obtaining an advice associated with that insight using the second tool.

32. The machine-readable storage medium of claim 31 wherein the pre-determined criteria is an equation, the equation being $T_1 - T_2$, where

T_1 represents a running time of at least one of a context and sub-context on the first system, and

T_2 represents a running time of at least one of the context and sub-context on the second system.

33.   A system comprising:

a first tool to obtain performance data about at least one system;

a sorter to sort the performance data by a number of contexts, each context divided into a number of sub-contexts;

a prioritizer to automatically prioritize the performance data for at least one sub-context using a pre-determined criteria; and

a second tool to obtain an insight for at least one sub-context based on the prioritized performance data and an advice associated with that insight.

34.   The system of claim 33 wherein the second tool comprises:

an insight module to determine the insight for the sub-context based on the prioritized performance data; and

an advice module to determine the advice associated with that insight.

35.   The system of claim 33 further comprising a comparator to compare a first system and a second system by comparing prioritized performance data of both systems.

36. The system of claim 33 further comprising a user interface to allow a user to input the pre-determined criteria.

37. The system of claim 33 further comprising a display to display at least one of the prioritized performance data, the insight, and the advice.

38. The system of claim 33 wherein the system is a processor.

39. The system of claim 33 wherein the sorted performance data includes performance data for a number of processes in each program, the program being the context and the processes being the sub-contexts.

40. The system of claim 33 wherein the sorted performance data includes performance data for a number of modules in each program, the program being the context and the processes being the sub-contexts.

41. The system of claim 33 wherein the sorted performance data includes performance data for a number of bins in each program, each bin containing a number of lines of programming instructions, the program being the context and the bins being the sub-contexts.

42. The system of claim 33 wherein the pre-determined criteria is the longest running time.

43.   The system of claim 33 wherein the pre-determined criteria is the greatest number of clockticks.

44.   The system of claim 33 wherein the pre-determined criteria is the greatest number of retired instructions.

45.   The system of claim 35 wherein the pre-determined criteria is an equation, the equation being $T_1 - T_2$, where

T_1 represents a running time of at least one of a contexts and a sub-context on the first system, and

T_2 represents a running time of at least one of the context and the sub-context on the second system.

46.   The system of claim 35 wherein the pre-determined criteria is an equation, the equation being $C_{T1} - C_{T2}$, where

C_{T1} represents the clockticks for at least one of a context and a sub-context on the first system, and

C_{T2} represents the clockticks for at least one of the context and the sub-context on the second system.

47.   The system of claim 35 wherein the pre-determined criteria is an equation, the equation being $0.8 \times C_{T1} - C_{T2}$, where

C_{T1} represents the clockticks for at least one of a context and a sub-context on the first system, and

C_{T2} represents the clockticks for at least one of the context and the sub-context on the second system.